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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Patent Application of

Andre SCHEELEN, *et al.*

Application No. 09/115,229

Confirmation No.: 1150

Filed: July 14, 1998

For: POLYETHYLENE-BASED COMPOSITION
AND PROCESS FOR THE MANUFACTURE
OF ARTICLES SHAPED FROM THE
COMPOSITION

Art Unit : 1772

Examiner: Rena Dye

Atty. Docket No. 32234-144216

Customer No.

26694

PATENT TRADEMARK OFFICE

REPLY BRIEF UNDER RULE 193(b)(1)

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is presented in response to the Examiner's Answer of March 2, 2004. It is
filed in triplicate.

FACTS

Claim 26 is the broadest claim in the slate of claims presented in the APPEAL
BRIEF, and it reads:

Claim 26 (Previously Added). An article of manufacture selected from the
group consisting of a pipe and a pipe coupling comprising a polyethylene-based
composition wherein the polyethylene exhibits a standard density, measured at
23°C according to ASTM Standard D 972, of greater than 940 kg/m³ and wherein
the **polyethylene-based composition comprises talc in an amount of less than
1 part per 100 parts by weight of polyethylene.**

Amended
3/12/04
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Claims 28 and 38, argued separately from claim 26 in the main brief, differ from claim 26 in that the amounts of talc are more restricted:

Claim 28 (Previously Added). The article of Claim 26, comprising **an amount of talc which is between 0.05 and 0.25 part per 100 parts by weight of polyethylene.**

Claim 38 (Previously Added). An article of manufacture ...**and talc in an amount which does not exceed 0.5 part per 100 parts by weight of polyethylene.**

At page 7 of the Examiner's Answer, the Examiner has indicated that the following subject matter would be allowable [although it does not include a recitation concerning an amount of talc which appears in an independent claim on appeal]:

'[A]n article of manufacture selected from the group consisting of a pipe and a pipe coupling comprising a polyethylene-based composition wherein the polyethylene exhibits a standard density, measured at 23oC according to ASTM Standard D972, of greater than 940 kg/m³ and wherein the polyethylene-based composition comprises talc in an amount of .1 part per 100 parts by weight of polyethylene to provide creep resistance.'

It appears that the USPTO position might be that the proposed allowable subject matter would appear to find support in the Scheelen DECLARATION, a copy of which is attached to the main BRIEF.

The applied references, both Jenkins et al. and Wooster et al., refer to talc. Jenkins et al. is the only reference to recite a numerical value for talc content.

Jenkins et al

Jenkins et al. relates to **films**. Accordingly, Jenkins et al. does not suggest compositions for making pipe and pipe coupling of Claims 26 *et seq.* The compositions of Jenkins are completely different from those of the rejected Claims **which recite contents of less than 1 part of talc per 100 part of polyethylene**. Specifically, Jenkins et al. discloses compositions containing

- from about 50 to about 95 weight percent of HDPE,
- from about 5 to 40 weight percent of polyisobutylene, and
- **from about 1 to 30 weight percent** of a filler, **such as talc**.

The content of talc in the Jenkins et al. compositions does not overlap with the range in the rejected Claims, and is expressed differently, *i.e.*, from about 1 to 30 weight percent of a filler such as talc.

By way of explanation it is noted that, the theoretically disclosed compositions of Jenkins et al containing the maximum of HDPE (*i.e.* 95wt % of HDPE) and the minimum of talc (*i.e.*, 1 wt % of talc) have an amount of talc which is $(1/95) \times 100 = 1.05$ **part of talc per 100 parts of HDPE**.

THE EXAMINER'S ANSWER

The Examiner's Answer makes two points which applicants address below

[1] "Since Jenkins et al. teach talc merely used as a filler, it would have been obvious to one having ordinary skill in the art to have used less filler if e.g. manufacturing cost were not an issue [Examiner's Answer, sentence bridging pages 4 -5]...

"Furthermore, it would have been obvious to one having ordinary skill in the art to have used more or less of the talc additive if manufacturing costs were of an issue. [Examiner's Answer, page 6 last sentence of the first full paragraph]"

[2] "Since Jenkins et al. teaches talc having a lower end range of 1%, the Examiner would like to note that only a very slight decrease in the weight % of talc would fall within the presently claimed range, i.e. .94 wt %, .95wt%, etc." [Examiner's Answer, page 5, lines1-3]

REMARKS-ARGUMENT

The applied references differ from the claims on appeal. This has been previously discussed in the main Brief. Accordingly, the first two factual inquiries mandated by *Graham v. John Deere* have been undertaken. It is the third and fourth inquiries which the Patent Office has failed to address, in the sense that determinations concerning "level of skill" and "unexpected results" are unsupported by any evidence.

There is an illogical conclusion, not based on facts in the record, which runs afoul of the requirement for factual determinations as to e.g. the level of skill in the art.

[2] "Since Jenkins et al. teach talc merely used as a filler, it would have been obvious to one having ordinary skill in the art to have used less filler if e.g. manufacturing cost were not an issue [Examiner's Answer, sentence bridging pages 4 -5]...

"Furthermore, it would have been obvious to one having ordinary skill in the art to have used *more or less of the talc* additive if manufacturing costs were of an issue. [Examiner's Answer, page 6 last sentence of the first full paragraph]"

A rational determination would seem to be: if filler were to be used, it would be to decrease the amount of polymer---with concomitant increase in the amount of filler---since polymer is presumptively more costly than "**filler**". The limit of increasing the amounts of

filler might be that amount which would cause the properties of composition of filler and polymer to suffer adversely with respect to intended end uses. This explanation is based on vernacular, not necessarily on science; however, the USPTO position with respect to the 'level of skill' is based on neither vernacular or science and is unsupported by description in the applied art.

Lastly applicants address the issue advanced by the Examiner:

[2] "Since Jenkins et al. teaches talc having a lower end range of 1%, the Examiner would like to note that only a very slight decrease in the weight % of talc would fall within the presently claimed range, i.e. .94 wt %, .95wt%, etc."

[Examiner's Answer, page 5, lines1-3]

For applicants' reasons set forth above, in response to the USPTO position with respect to "filler", the construction --or interpretation ---of the actual Jenkins description to use less than 1% is illogical; the exact numbers picked by the USPTO differ by greater than experimental error.

Moreover, with respect to claims 28 and 38 an extrapolation of that reasoning by the USPTO constitutes hindsight. In **claims 28 and 38, the upper limit of talc is 25% and 50%, respectively, of the lower limit of 1% in Jenkins**, to wit

"Claim 28....amount of talc which is between 0.05 and 0.25 part per 100 parts by weight of polyethylene.

Claim 38.... and talc in an amount which does not exceed 0.5 part per 100 parts by weight of polyethylene."

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To narrow the issue applicants withdraw the appeal of Claim 26 and authorize the USPTO to cancel Claim 26 to place the case in condition for allowance.

Reconsideration and withdrawal of the pending rejections is respectfully solicited.

Respectfully submitted,

Date

Monday, May 3 2004

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